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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/000,057	11/01/2001	Jason E. Dargontina	06 1421 01 01	9505

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EXAMINER	
BISSETT, MELANIE D	

ART UNIT	PAPER NUMBER
1711	

DATE MAILED: 08/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/000,057	DARGONTINA ET AL.	
	Examiner	Art Unit	
	Melanie D. Bissett	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *04 August 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *17-19,21 and 31-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *17-19,21,31-50* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. The rejections based on 35 USC 103 have been maintained.

2. The request filed on 8/4/04 for Continued Examination under 37 CFR 1.114 based on parent Application No. 10/000,057 is acceptable and an RCE has been established. An action on the RCE follows.

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

4. Claims 17-18, 31-32, 42-48, and 49-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blum ('873) in view of Kubota Corp, and vice versa.

5. From a prior Office action:

> Blum teaches an aqueous binder composition comprising a polyurethane dispersion to be used as a coating (abstract). Polyurethane dispersions using aliphatic isocyanates are preferred (col. 5 lines 24-35). The coatings are useful as basecoats or topcoats for fiber cement building materials, where the coatings are preferably cured at temperatures from room temperature to 80 °C (col. 7 lines 1-21). Thus, the reference teaches thermal curing of the coatings at temperatures lower than 100 °C. Note that the making of a "fiberboard cement siding product" is deemed an intended use. Thus, since a coated fiberboard cement product could be used as a siding product, it is the examiner's position that this limitation is anticipated by the reference. Although Blum teaches the coatings as basecoats and topcoats, the reference does not exemplify a method of providing a fiberboard cement substrate, coating the surface with a decorative coating, coating the first coating with a top coating, and curing the top coating. Kubota Corp demonstrates that such a process is conventional in the fiber-reinforced cement board art. Kubota teaches forming a basecoat on the surface of a fiber-reinforced cement board substrate, providing an ink layer on the base coat, and applying a clear coating on the ink layer (abstract). The clear paint coating is used to protect the underlying coatings and substrate from weathering [0007]. Thus, it is the examiner's position that it would have been prima facie obvious to form the structure of Kubota Corp's teaching in Blum's invention to provide fiber cement board substrates having a desired appearance but also having a protective clear coating.
>
> Kubota Corp applies as above, teaching the method of applying a basecoat to a fiber-reinforced cement substrate, applying an ink pattern, and finally applying a clear topcoating.

However, the reference does not teach the composition of the top coating. Blum teaches polyurethane dispersion coatings that are useful as top coatings on fiber cement substrates. The coatings are preferably thermally cured at temperatures of room temperature to 80 °C. The coatings have been shown to have improved solvent resistance while reducing the amount of organic solvents needed for coating (examples; col. 1 lines 15-45). Thus, it is the examiner's position that it would have been prima facie obvious to use Blum's polyurethane dispersion coatings as the clear coatings in Kubota Corp's invention to form coatings having improved solvent resistance while minimizing the amount of organic solvent used in the process.

Regarding the claimed molecular weights, Blum teaches the use of polyester polyols having number average molecular weights of 500-50,000 (abstract). Since the polyols themselves can have molecular weights as high as 50,000, it is the examiner's position that it would have been prima facie obvious to form a polyurethane having a high molecular weight in the expectancy of forming a coating with equivalent solvent resistance.

Regarding the claimed acid numbers, note that Blum teaches polyester polyols having acid numbers of ≤10 and ≤15 (examples). Since the polyurethane dispersions are made by the same types of reactants as those used by the applicant, it is the examiner's position that the polyurethane dispersions of Blum would possess the applicant's claimed acid numbers. Also, note that it has been shown that polyester polyurethane dispersions made by neutralizing polyester polyurethanes conventionally possess acid numbers within the applicant's claimed range, where the starting polyesters have the same acid numbers as those of the primary reference (Blum et al. '209, col. 1 line 52-col. 2 line 17; col. 3 lines 34-38). From this showing, it is the examiner's position that the polyurethane dispersions of Blum '873 would possess the claimed acid numbers.

6. Regarding the steps of coating a sealer layer and coating a decorative coating thereon, it is the examiner's position that the Kubota Corp reference teaches these steps in providing a basecoat and ink layer. Note that acrylic urethane materials are exemplified as basecoat materials. It is the examiner's position that one of ordinary skill in the art would recognize the inherent sealing ability of such materials. The applicant has noted the use of acrylic latex materials as preferred sealing layers, and the Blum reference teaches urethane materials as sealing layers. Also note that, in the broadest interpretation of the term "sealer", a material having any amount of sealing ability would be encompassed. Thus, it is the examiner's position that the Kubota Corp reference

teaches steps of coating a sealing layer and a decorative layer, which are combinable with the Blum reference for the reasons cited above.

7. Claims 33-41 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blum ('873) in view of Kubota Corp, or vice versa, as applied to claims 17-18, 31-32, 42-45, and 49-50 above, and further in view of Takahashi ('352).

8. From a prior Office action:

> Blum and Kubota Corp apply as above, teaching protective top coating layers but failing to specify the thickness of the top layer or the use of abrasion resistance agents. Takahashi teaches polyurethane coatings for fiber cement substrates, also teaching the conventionality of using protective layers at a thickness of 5-30 μm (col. 7 lines 1-2). It is the examiner's position that it would have been prima facie obvious to one of ordinary skill in the art to use a conventional coating thickness for the top coatings in Blum and Kubota Corp to optimize solvent resistance and protection of the underlying layers.
>
> Furthermore, Takahashi teaches the conventionality of adding particles to the surface protective layers to improve abrasion resistance of the articles (col. 4 lines 52-67). Because the coatings of Blum and Kubota Corp serve to protect underlying layers of a building material, it is the examiner's position that it would have been prima facie obvious to include additives in the top coatings known to improve the abrasion resistance of the articles.

9. Claims 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Blum ('873) in view of Kubota Corp, or vice versa, and Takahashi ('352) as applied to claims 33-41 above, and further in view of Harper et al.

10. From a prior Office action:

> The references apply as above, noting the use of cement fiberboard substrates but failing to note the distinct compositions of those substrates. Harper discloses non-asbestos corrugated sheets comprising amounts of silica, cement, and cellulose fibers to form sheets suitable for external cladding and roofing (abstract). The densities of the sheets exceed 1400 kg/m^3 (1.4 g/cm^3) (col. 3 lines 1-4). These sheets have improved strength and durability for asbestos-free products (col. 1 lines 48-52). Thus, it is the examiner's position that it would have bee-n prima

facie obvious to use the substrates of Harper's invention for the composites of Blum, Kubota Corp, and Takahashi to produce a product having improved strength and durability.

Response to Arguments

11. Applicant's arguments filed 8/4/04 have been fully considered but they are not persuasive.

12. Regarding the applicant's arguments that Kubota teaches a thermosetting paint primer but not a sealer, it is the examiner's position that the paint primer inherently acts as a sealer. As stated above, it is the examiner's position that the exemplified material, acrylic urethane, would have sealing properties. Both acrylic and urethane materials are known for their sealing properties, so it seems reasonable that an acrylic urethane material would also possess such sealing properties. Although the reference chooses the material for its adhesive properties, the material would still inherently possess sealing ability. The Kubota reference, when combined with the Blum reference, teach the claimed methods.

13. Regarding the arguments that the Takahashi and Harper references do not cure the deficiencies of the Blum and Kubota references, it is the examiner's position that the combination of the Blum and Kubota references would teach the claimed method of the independent claim. The Takahashi and Harper references have been applied for teaching other components that would have been obvious variants of the method. Takahashi has been applied to show conventional thicknesses and additives for topcoat compositions. One of ordinary skill in the art would expect the thickness and additives of similar topcoat compositions to have the same improved properties, regardless of the

presence or absence of a basecoat. Thus, the Takahashi reference would not "teach away" from using a basecoat in the invention of Kubota. It is the examiner's position that the references are combinable.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melanie D. Bissett whose telephone number is (571) 272-1068. The examiner can normally be reached on M-F 8-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on (571) 272-1078. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MELANIE BISSETT
PATENT EXAMINER

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